



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

DIVISION OF
CORPORATION FINANCE

January 5, 2007

Mail Stop 7010

By U.S. Mail and facsimile to (617)-338-2880

John N. Hatsopoulos
Chairman
Glenrose Instruments Inc.
45 First Avenue
Waltham, Massachusetts 02451

**Re: Glenrose Instruments Inc.
Form 10
Filed November 17, 2006
File No. 000-51645**

Dear Mr. Hatsopoulos:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. Please note that the Form 10 goes effective by lapse of time 60 days after the registration statement was filed pursuant to Exchange Act Section 12(g)(1). If our comments are not addressed within this 60 day time period, you should withdraw

the Form 10 prior to effectiveness and refile a new Form 10 that includes changes responsive to our comments.

2. As you are aware, your registration under Section 12(g) of the Securities Exchange Act of 1934 is voluntary and following registration you will be required to file periodic reports with the SEC under Section 13(a) of the Exchange Act. Once the registration statement is effective, the only way to discontinue your reporting obligations without violating federal securities laws will be to deregister the securities by filing Form 15 under Exchange Act Rule 12g-4.

Segment Reporting

3. We note the following disclosures in your filing:
 - Beginning on page 3, under Item 1. Business, you separately present and discuss Analytical Laboratory Services and Environmental Services, including a separate discussion of services and clients.
 - On page 14, you disclose that you incurred losses and continue to incur losses in your laboratory business, and that there is no indication that prices will improve. You further indicate on page 22 that your labs have not been profitable and you still have substantial work to meet profit goals with an expectation that labs will remain unprofitable through 2006 or 2007.
 - In relation, you disclose on page 27 that you took a goodwill charge of \$606,403 in fiscal year 2004 related to the consolidation of Lionville Laboratories with Eberline Services. We note paragraph 18 of SFAS 142 indicates that goodwill should be tested for impairment at a level of reporting referred to as a reporting unit and paragraph 50 of SFAS 141 requires that assets acquired and liabilities assumed, including goodwill, be assigned to a reporting unit as of the date of acquisition.
 - Your disclosures on page 17 indicate that your radiological services businesses compete with many national environmental and consulting firms, whereas your laboratory business competes with many regional or niche firms.
 - Your revenue recognition policy on page 60 indicates a separate revenue stream for your lab services compared to your government service contracts.

In light of these disclosures, it is unclear to us how you have determined that your operations represent a single operating segment. Please identify for us your operating segments pursuant to paragraph 10 of SFAS 131. As part of your response, please identify your chief operating decision maker and provide us with copies of the relevant financial reports reviewed by your chief operating decision maker.

Please also tell us in detail how you determined that your operating segments met each of the criteria in paragraph 17 of SFAS 131 for aggregation. To the extent you are aggregating operating segments because you believe your segments are economically similar, please provide us with an analysis that includes historical revenues, gross profits, gross profit margins, operating profits, and operating profit margins, along with any other information you believe would be useful for each of your operating segments to help us understand how these operations are economically similar. Please also address any differences in the trends these financial indicators depict (e.g. if gross profit margin is decreasing for one operation and increasing for another).

Business, page 3

4. Please revise to disclose under this heading information regarding your corporate structure, which is currently located in the note 1 to the consolidated financial statements for 2004 and 2005, as well as in note 1 to your interim financial statements.
5. Please revise to explain what you mean by your statement that you will “acquire instrument companies with solid technology”
6. Please disclose the basis for your statement in the second paragraph on page 4 that “[a] significant portion of future Department of Defense and Department of Energy environmental expenditures will be directed to cleaning up military bases and to restoring former nuclear weapons facilities.”
7. Please disclose the source(s) on which you base your assertion that the analytical instrument market generated revenues of \$25 billion in 2004, as well as the industry reports estimating revenues of \$30 billion in 2006 and other market sales estimates disclosed under Analytical Instruments.”
8. We note your statement that there are over 60 types of analytical instruments being sold into a variety of markets worldwide. To the extent you are able to do so, please expand your discussion to address the types of instruments that will be made by the companies you seek to acquire.
9. Please revise your disclosure under Clients on page 6 to identify any of the federal government’s prime contractors who are responsible for 10 percent or more of your consolidated revenues, if the loss of such a prime contractor customer would have a material adverse effect on your business. See Regulation S-K, Item 101(c)(1)(vii).
10. Please revise to address the extent to which your business is seasonal. We note your attribution of fluctuating operating results to the seasonality of the federal

government's spending cycle and weather conditions in your risk factor disclosure appearing on page 17. See Regulation S-K, Item 101(c)(1)(v).

Risk Factors, page 14

11. Delete "will" from the list of words intended to identify forward-looking statements.

We are substantially dependent on contracts with the U.S. Government, page 14

12. Please identify the two contracts that account for a large portion of your revenue and quantify the percentage of your revenue that each represents.

We have incurred losses . . . , page 14

13. We note your statement that "[p]rices and [the] availability of samples have declined" Please revise here and in the following risk factor to provide additional information regarding the significance of samples to your business and how a decline in the availability of samples adversely affects your profitability.

Financial Information, page 20

14. We note that you have presented four fiscal years of selected consolidated financial data on page 20. Revise your table to include five years of data. Refer to Item 301 of Regulation S-K.
15. Revise your Form 10 to include a Contractual Obligations table. Refer to Item 2 of Form 10 and Item 303(a)(5) of Regulation S-K.

Critical Accounting Policies, page 22

16. In consideration of the significance of your goodwill, it is unclear as to what your remaining goodwill balance is related to based on your current disclosures. Please include a critical accounting policy that identifies the business acquisition that your goodwill was acquired, the factors that resulted in the recognition of goodwill, and the date of acquisition. In addition, disclose the procedures you performed at your testing dates to determine that your existing goodwill was not impaired, including your basis for determining that your remaining goodwill is recoverable at December 31, 2005.

Results of Operations, page 24

17. We note your effective tax rates for the nine months ended September 30, 2006 and September 30, 2005 are 0.43% and 0%, respectively. We further note your

- effective tax rate for the year ended December 31, 2005 was also 0%, whereas for the year ended December 31, 2004, you recorded a provision for income taxes of \$359,088 on a net loss of \$1,598,652, resulting in an effective tax rate of 22.5%, at which time a reader would expect a tax benefit. Your effective tax rate of 127.2% for the year ended December 27, 2003 is also unclear to us. Please revise your Results of Operations disclosures for each period presented to discuss and quantify the reasons for the differences between your effective tax rates and the federal income tax rate.
18. Revise your results of operations discussion for the year ended December 31, 2005 to better disclose the reasons for the fluctuations in your line items. Specifically, quantify the reasons for the fluctuations as well as explain how the better utilization of your personnel increased your cost of sales. Similarly, for your general and administrative expenses, quantify the reasons for the decrease in these expenses year over year, as well as how the more efficient use of your indirect personnel impacted these expenses. Your current disclosures are vague in consideration that you cite the better utilization of your personnel increased cost of sales whereas the better utilization of your indirect personnel decreased your general and administrative expenses.
 19. Expand your discussion of results of operations for the year ended December 31, 2004 to explain and quantify the reasons for the changes in your operations. Specifically, you have not disclosed any reasons for the fluctuations in your cost of sales or general and administrative expenses. We note cost of sales increased \$2.7 million from the prior year and general and administrative expenses decreased \$498k over the prior year. In addition, expand your disclosures to allow your readers to understand how the shift in the revenue mix between the laboratories and the service projects impacted your gross profit in 2004. Refer to guidance presented in Release No. 33-8350: Interpretation - Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operations.

Liquidity, page 29

20. Please revise your liquidity and cash resources disclosures to discuss the underlying reasons for the changes in the account balances that affected your cash flows for the year. Your disclosure should not merely be a recitation of financial statement balances. Refer to guidance presented in Part IV, Liquidity and Capital Resources of Release No. 33-8350: Interpretation - Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operations.

Security Ownership of Certain Beneficial Owners and Management, page 32

21. Please revise to indicate that beneficial ownership is determined in accordance with Exchange Act Rule 13d-3.
22. Please update the disclosure contained in this section to the most recent practicable date. Refer to Item 403(a) of Regulation S-K.

Executive Officers and Directors, page 34

23. Please revise your discussion of Mr. Hatsopoulos' business experience to disclose the time period in which he held each position discussed. Refer to Item 401(e) of Regulation S-K. Similarly revise the discussion of your other officers and directors, as applicable.

Market Price of and Dividends on the Registrant's Common Equity . . . , page 44

24. We note your statement that you expect that your common stock will be traded on the OTCBB. Please revise your disclosure to clarify, if true, that you intend to contact an authorized OTCBB market maker for sponsorship of your securities on the OTCBB.

Description of Registrant's Securities to be Registered, page 45
Common Stock, page 46

25. Please delete the last sentence of the second paragraph under this heading, as you are not conducting an offering of common shares.

Financial Statements

Report of Independent Registered Public Accounting Firm, Neff & Ricci LLP, page 52

26. We note your predecessor accountants make reference to another auditor's report. Please include this report in your Form 10. Refer to Article 2-05 of Regulation S-X.
27. We note that Neff and Ricci LLP audited the Lionville Labs goodwill for impairment as of December 31, 2003 and 2002, and their report is dated February 24, 2005. In addition, we note that in their audit report in your Form 10-12G filed on December 5, 2005, your auditors do not disclose that they have audited the Lionville Labs goodwill for impairment as of December 31, 2003 and 2002 and their audit report is also dated February 24, 2005. Therefore, it appears that Neff and Ricci LLP performed additional audit work after February 24, 2005 related to the Lionville Labs goodwill. Pursuant to AU Section 530, please have your auditors tell us why they did not dual date their report for this additional work.

Note 1 – Organization and Significant Accounting Policies, Organization, page 58

28. Your disclosure that, “The 2003 consolidated financial statements have been restated to reflect the business combination as if Lionville was acquired in the beginning of 2003” is unclear to us. Please tell us the actual date that you acquired Lionville. In consideration of paragraphs 48 and 49 of SFAS 141, please tell us why you did not begin to consolidate Lionville as of the date of acquisition.

Fiscal Year, page 58

29. You disclose that your fiscal year-end is the last Sunday of each calendar year. Further, the headings of your financial statements are for the years ended December 31, 2005, December 31, 2004, and December 27, 2003. We further note your auditors’ reports refer to the years ended December 31, 2005 and December 31, 2004. However, the last Sunday in 2005 and 2004 was December 25 and December 26, respectively. Your current disclosure is unclear of how you have accounted for transactions between your year-end and December 31, such as the recording of sales and expenditures. Please revise accordingly.

Goodwill, page 59

30. We note that you recorded a goodwill impairment charge of \$606,403 in the year ended December 31, 2004, which represents 31% of your net loss. Your current disclosures are unclear as to what lead to this goodwill impairment charge at the time of charge. Revise your filing to include the disclosures required by paragraph 47 of SFAS 142.

Note 6 – Related-Party Transactions, page 64

31. We note that you have recorded an asset of due from related parties of \$553,636 and \$332,292 as of December 31, 2005 and December 31, 2004, respectively. You disclose in Note 6 that Eberline Services and Lionville Labs owes these amounts to GlenRose Partnership. You disclose on page 58 that in September 2005, GlenRose Partnership LP entered into a stock-exchange agreement to exchange 100% of the stock of Eberline Services for 100% of the stock of GlenRose Instruments Inc. Further, you disclose that GlenRose Instruments Inc. owns 100% of the stock of Eberline Services, Inc., Eberline Services Hanford, Inc., and Lionville Labs, Inc. In addition, we note your disclosure on page 32 that all of your outstanding common stock is currently owned by the GlenRose Partnership. Your accounting for these related party receivables is unclear to us. Under your principles of consolidation policy on page 22, you disclose that you eliminate all significant inter-company transactions. Please explain why these receivable balances have not been eliminated in your consolidated financial statements.

Note 8 – Income Taxes, page 66

32. We note that your adjustment to valuation allowance has been (\$170,877), \$669,246, and \$360,000 for the years ended December 31, 2005, December 31, 2004, and December 27, 2003, respectively. We further note that your adjustment to valuation allowance resulted in no income tax expense for the year ended December 31, 2005 and for the year ended December 31, 2004, your adjustment to valuation allowance resulted in income tax expense when you had a loss before taxes. Please tell us in detail the reasons for the significant changes in your adjustment to valuation allowance. In addition, provide us with a reconciliation of why your adjustment to valuation allowance for the year ended December 31, 2005 is not the difference in your valuation allowance from December 31, 2004 to December 31, 2005 in your net deferred taxes calculation.

Notes to Interim Financial Statements for period ending September 30, 2006, page 73

33. Please revise your Form 10 to include footnotes for significant items in your interim period ended September 30, 2006. Specifically, include a footnote for your Property and Equipment and Long-Term Debt.
34. In addition, ensure that your interim notes are updated through September 30, 2006. For example, Concentration of Credit Risk on page 74 discusses accounts receivable at December 31, 2005.

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

John N. Hatsopoulos
Glenrose Instruments Inc.
January 5, 2007
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- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Ryan Rohn, Staff Accountant, at (202) 551-3739 or Al Pavot, Senior Staff Accountant, at (202) 551-3738 if you have questions regarding comments on the financial statements and related matters. Please contact Matt Franker, Staff Attorney, at (202) 551-3749 or me, at (202) 551-3767 with any other questions.

Sincerely,

Jennifer R. Hardy
Branch Chief

cc: Edwin L. Miller, Jr.
Sullivan & Worcester LLP
One Post Office Square
Boston, Massachusetts 02109